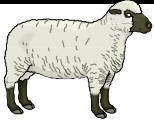


FACT SHEET

California Department of Food and Agriculture



Scrapie - May 1998 -



Introduction - Scrapie is a fatal, degenerative disease primarily affecting the nervous system of sheep, and sometimes goats. Scrapie is one of a group of diseases known as the spongiform encephalopathies. Other similar diseases in this group may affect ranch-farmed mink, elk, mule deer, cats, cattle, and people. The disease that affects cattle, and is currently present in Great Britain and several other European countries, is bovine spongiform encephalopathy (BSE). All of these diseases have one thing in common, they result in the formation of sponge-like spaces in the brain tissue of the affected animal or person. These spaces affect the brain's ability to control bodily functions and eventually result in death.

Cause - The exact cause of scrapie, and other spongiform encephalopathies, is unknown. Some scientists believe that the agent causing scrapie is an infective protein called a prion, which is smaller than the smallest known virus.

Spread of Disease - The agent causing scrapie may be spread by oral ingestion, injection, and, most commonly, by passage from dam to offspring at birth. The agent may also be spread to other newborns that are born around the same time that the scrapie-affected ewe lambled. Transmission is believed to occur through contact with the birth fluids and placenta of the affected animal.

Although scrapie is considered an infectious disease, it may also have a genetic component. Genetic variations among breeds of sheep may play a role in whether sheep will become infected and how quickly signs may appear. Certain breeds of sheep in the United States, such as the black-faced breeds, are more often affected by scrapie than other breeds. Importantly, no breed is completely resistant to scrapie and the disease has been diagnosed in many different breeds and crossbreeds in the United States.

Development of Disease - Once the scrapie agent is transmitted to the sheep or goat it may take 2-5 years for the animal to show signs of disease. This unusually long incubation period complicates control, because the animal may be spreading the infection within the flock before it shows signs of disease.

Frequently, the first signs of scrapie are skin lesions and wool loss. Sheep will scrape themselves against objects (hence the name scrapie) and damage their skin and wool. When you rub these skin lesions the sheep will frequently show a nibbling response at the mouth. Affected animals also may grind their teeth, tremble or show muscle spasms, display aggression for no apparent reason, and stagger or stumble when they walk. As the disease progresses the animal may lose body condition and suffer from other chronic illnesses such as pneumonia. Death usually occurs within 1-6 months after the first signs of scrapie appear.

Identifying Infected Animals - Once an owner notices any of the signs of scrapie they should contact a veterinarian. The veterinarian will examine the animal to determine if a disease other than scrapie is causing the signs. Many diseases cause similar signs, and some are easily treated. For example, mange or "scabs" and ringworm can mimic the skin lesions of scrapie. Chemical and plant poisons, nutritional deficiencies, trauma, and parasitism may resemble the incoordination and staggering seen with scrapie. Rabies, a fatal neurologic disease that can affect all mammals, also will be considered by the veterinarian. Chronic weight loss may be caused by many conditions including parasitism, malnutrition, "broken mouth" or missing teeth, and caseous lymphadenitis.

Diagnosis - There is currently no officially recognized test to diagnose scrapie in a live animal. Researchers are currently working on a practical live-animal test, which uses lymphoid tissue from the inner eyelid, to determine if an animal has scrapie. If successful, this test would be useful in identifying infected animals before they show signs. The test is still in the development stage and has not been approved for general use.

At the present time, if the veterinarian suspects scrapie, the only way to be certain of the diagnosis is to submit the animal to the diagnostic laboratory. The animal will be euthanatized (killed) and a section of the brain will be examined microscopically to look for sponge-like changes.

Treatment - None.

Control and Prevention - Producers can minimize the risk of scrapie entering their herds by participating in the Voluntary Flock Certification program that is a cooperative effort among producers, allied industry representatives, accredited veterinarians, and State and Federal animal health officials. A participating flock can become certified scrapie free after five years of participation if all of the program standards are met. The program provides producers with the tools to protect their flocks from the devastating effects of scrapie and also enhances the marketability of their animals.

Zoonotic Potential - Zoonotic disease can be spread from animals to people. There is no evidence to indicate that scrapie poses a risk to human health.

For additional information call:

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Or visit our website at:
www.cdfa.ca.gov/animal/animal_health/index.html